Indian Journal of Geo Marine Sciences
Vol. 49 (04), April 2020, pp. 695-697

Short Communication

First report of *Cephea cephea* (Forskål, 1775) from North Eastern Arabian Sea, India

J Mondal* & C R Asha Devi

Centre for Marine Living Resources and Ecology,
Ministry of Earth Sciences, Atal Bhavan, Puthuvype, Kochi,
Kerala – 682 508, India

Received 08 October 2018; revised 17 January 2019

Faunal communities under the Class Scyphozoa are commonly known as true jellyfishes. One species of scyphozoan *Cephea cephea* (Forskål, 1775) is recorded as new record to Indian waters. The present study deals with the taxonomic characterization and distribution of *C. cephea* in the Arabian Sea.

[Keywords: Arabian Sea, Indian EEZ, New record, Scyphozoa]

Introduction

The faunal communities under the Phylum Cnidaria and Class Scyphozoa are commonly known as jellyfishes. However, some free-living medusoid forms under the Class Hydrozoa are also commonly known as jellyfishes. These are widely distributed from polar region to tropical region and found from coastal waters to the oceanic region[1]. Several estuarine jellyfishes are also reported throughout the globe as they have the tolerance of wide range of salinity and temperature but they are mostly hydrozoan jellyfish as scyphozoans are considered as exclusively marine forms. The size of jellyfish usually varies greatly from 12 mm to the largest 40 meters[1,2]. Studies on the jellyfishes are very few world-wide, and they are considered as the lesser known group in Indian context[1]. Recently, Gul *et al.*[3] stated that interests in jellyfishes are increasing in recent years due to their swarming phenomenon which have implications in the ecosystem as a whole[3]. However, the present paper deals with the range distribution of *Cephea cephea* from Indian waters for the first time.

Materials and Methods

A single specimen used in the present study was sampled during *BONGO* operation on 4thJanuary, 2018 from Off Okha (Lat.: 22°05.690' N; Long.: 68°46.704' E) at 14:30 hrs (Indian Standard Time) onboard *FORV Sagar Sampada* (Cruise No. 369). Photographs of live specimen were taken immediately and the specimen was preserved in 4 % formaldehyde-seawater solution. The detailed taxonomic studies were made in conjunction with Gul *et al.*[3], Mayer[2], and Kramp[4] for species identification. After the completion of the study the specimen was deposited in Centre for Marine Living Resources and Ecology with Voucher ID (Accession number): IO/SS/SCY/00001.

*Corresponding author: jmjhimli@gmail.com

Results

Phylum: CNIDARIA Hatschek, 1888
Class: SCYPHOZOA Goette, 1887
Subclass: DISCOMEDUSAE Haeckel, 1880
Order: RHIZOSTOMEAE Cuvier, 1800
Suborder: KOLPOPHORAE Stiasny, 1920
Family: CEPHEIDAE Agassiz, 1862
Genus: *Cephea* Peron & Lesuer, 1810
Cephea cephea (Forskål, 1775)

Synonym

- *Cephea conifera* Haeckel, 1880

Description

The specimen reported exhibited lilac or purplish colour in live condition (Figs. 1a - c). It was 250 mm wide (Fig. 1d). The low central dome in exumbrella consists of 16 large, conical, pointed wart-like structures along with 7 small similar structures (Figs. 1a & b). Numerous small brown coloured spots are present surrounding the base of the projections (Figs. 1a & b). This spots are also observed in preserved specimens. However, the margin of the bell is brown in colour during live condition but the colour faded when preserved in formalin. Eight rhopalium is present within in margin areas. There are 70 marginal lappets present and in each octant 7-9 lappets are seen. The velar lappets are joined by web, so margin of the bell seems nearly entire[2]. Inner part of the bell contains numerous radial muscles. There are 8 stout laterally compressed oral arms, which are profusely branched (Figs. 1c, e & f). Oral arms are containing brown pigments at the free ends of the arms in live condition (Fig. 1c). More than 100 long very fine and milky white (in live condition) filaments are present (Figs. 1c, e & f). 5-6 inter-rhopalar canals are visible in each octant which is distinguished by the very deep rhopalar clefts.

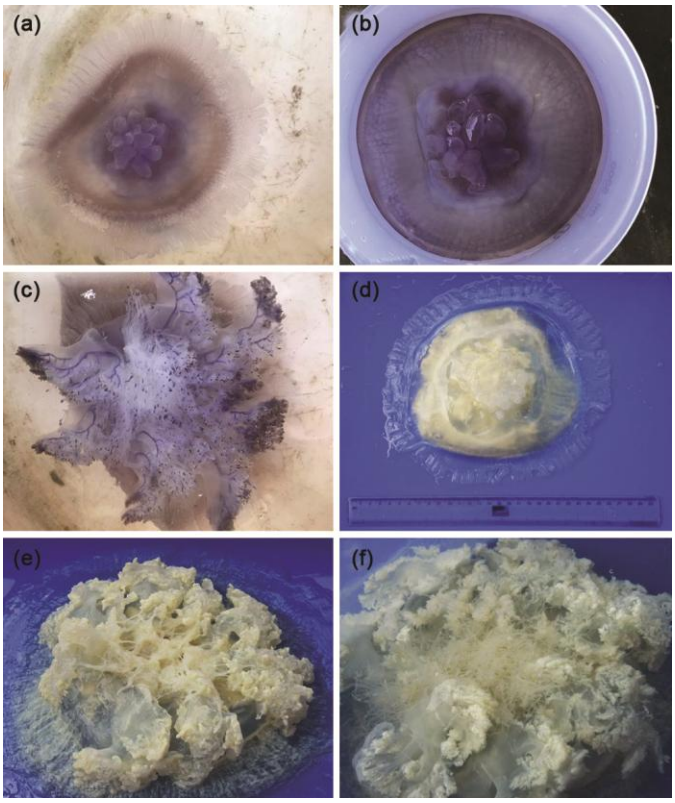

Fig. 1 — *Cephea cephea* (Forskål, 1775): a & b) aboral surface of live specimen; c) oral surface of the live specimen; d) aboral surface of the preserved specimen; and e & f) oral surface of the preserved specimen

Remarks

Menon reported a specimen as *Cephea* sp. from Madras Coast[5]. The description neither give a clear conclusion about the record of *Cephea cephea* nor mentioned any fine long filament like structures which is major characteristic of the said species. However, Kramp reported only *Cephea* sp. from Car Nicobar Island of Andaman and Nicobar Islands but did not mention any description of the specimen[4].

Distribution

The species is previously recorded from Red Sea, Japan, Indian and Pacific Oceans, Philippines, Australia, Malay Archipelago, Marquesas Islands, Gambier and Touamotou[4].

Discussion

Till date, a total of 30 species of scyphozoans are reported from Indian waters out of the 191 valid species across the world's oceans. A total of 13 species of scyphozoans are recorded from the west coast of India[4-7]. Hale mentioned that the species of the Cephidae family can be found in warmer tropical waters[8]. Five species under the family Cephidae are reported from Indian waters[4,5]. Gul *et al.*[3] reported *Cephea coerulea* from the North Arabian Sea of Pakistani waters (24°59.03′ N, 065°43.62′ E)[3]. This newly reported scyphozoan jellyfish i.e. *C. cephea* (Forskål, 1775) will enhance the number of scyphozoan database along the Indian EEZ. Further exploration on jellyfish taxonomy and ecology are required from Indian waters for better understanding of their diversity and distribution of these faunal communities due to their importance in the Marine Ecosystem.

Acknowledgements

Authors are thankful to the Dr. M. Sudhakar, Director, Centre for Marine Living Resources and Ecology, Kochi for providing the necessary facilities. Authors are thankful to Dr. G.V.M. Gupta and Dr. Anil Kumar Vijayan for their support to carry out the field study. Authors are also thankful to the Ministry of Earth Science, Government of India for their financial support. The support extended by the cruise members *FORV Sagar Sampada* (Cruise No. 369) are also duly acknowledged. The present study is a part of MEDAS project of MLRP, CMLRE, MoES, Govt. of India. This is CMLRE contribution: 101.

Conflict of interest

Authors declare that there is no conflict of interest regarding the publication of this article.

Author contributions

All the authors have same contribution for the species identification as well as the preparation of the manuscript.

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